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1. The Protein Data Bank and the challenge of structural genomics

Helen M. Berman, T. N. Eibart, Philip E. Bourne, Zukang Feng, Gary Gilliland, Helge Weissig, John Westbrook

SUMMARY: The PDB has created systems for the processing, exchange, query, and distribution of data that will enable many aspects of high throughput structural genomics....**CONTEXT:** ...of structures on a genomic scale in a high-throughput mode will have an impact on every aspect of the Protein Data Bank (PDB) -- the single archive for all biomacromolecular structural data. Although estimates vary, the PDB could.....*Nature Structural Biology*7, 957 - 959 (01 Nov 2000) DOI:10.1038/80734Perspectives
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2. Structural proteomics of an archaean

Dinesh Christendat, Adelinda Yee, Avil Dharmsi, Yuval Kluger, Alexei Savchenko, John R. Cort, Valerie Booth, Cameron D. Mackerein, Vivian Sandakis, Irena Ekiel, Guennadi Kozlov, Karen L. Maxwell, Ning Wong, Lawrence P. McIntosh, Kalle Gehring, Michael A. Kennedy, Alan R. Davidson, Erni F. J. Gel, Mark Gerstein, Aled M. Edwards, Cheryl H. Arrowsmith

SUMMARY: A set of 420 nonmembrane proteins from *Methanobacterium thermoautotrophicum* were cloned, expressed and purified for structural studies. Of these, ~20% were found to be....**CONTEXT:** The completion and near completion of the sequencing phase of genome projects has ushered in the age of proteomics, the study of all gene products in an organism. This flood of sequence information coupled with recent advances in.....*Nature Structural Biology*7, 903 - 909 (01 Oct 2000) DOI:10.1038/82823Article
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3. From structure to function: Approaches and limitations

Janel M. Thornton, Annabelle Todd, Duncan Milburn, Neera Borkakoti, Christine A. Orengo

SUMMARY: This review presents a summary of current approaches to extract functional information from structural data on proteins and their complexes. While structural information may.....**CONTEXT:** The essence of structural genomics is to start from the gene sequence, produce the protein and determine its three-dimensional structure. The challenge, once the structure is determined, is to extract useful biological information about.....*Nature Structural Biology*7, 991 - 994 (01 Nov 2000) DOI:10.1038/80784Perspectives
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4. Structural genomics in the biotechnology sector

Sarah Dry, Sean McCarthy, Tim Harris

SUMMARY: Commercial efforts in structural genomics focus on providing to pharmaceutical customers information that relates to the suitability of specific proteins as drug targets and.....**CONTEXT:** Commercial structural genomics aims to capitalize upon, and extend, the recent flood of genomic sequence and expression information, translating it into a form that is directly applicable to target validation and to structure-aided.....*Nature Structural Biology*7, 946 - 949 (01 Nov 2000) DOI:10.1038/80718Perspectives
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5. An overview of structural genomics

Stephen K. Burley

SUMMARY: With access to sequences of entire human genomes plus those of various model organisms and many important microbial pathogens, structural biology is on the.....**CONTEXT:** ...three-dimensional structural information with whole genome sequences are well-documented by the enormous success of investigator-initiated, hypothesis-driven biomedical research using X-ray crystallography and NMR spectroscopy. To.....*Nature Structural Biology*7, 932 - 934 (01 Nov 2000) DOI:10.1038/80697Perspectives
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6. Arise, go forth, and solve structures

Description: In 1962 -- when Max Perutz and John Kendrew shared the Nobel prize for their.....**CONTEXT:** In 1962 -- when Max Perutz and John Kendrew shared the Nobel prize for their work on protein crystal structures -- who would have predicted that today there would be nearly 9,000 structures in a freely and easily accessible electronic.....*Nature Structural Biology*5, 1019 - 1020 (01 Dec 1998) DOI:10.1038/4127Editorial
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7. Structural genomics of RNA

Jennifer A. Doudna

SUMMARY: A detailed understanding of the functions and interactions of biological macromolecules requires knowledge of their molecular structures. Structural genomics, the systematic determination of all.....**CONTEXT:** ...have important or essential biological functions in cells, beyond the well-established roles of ribosomal, transfer and messenger RNAs in protein biosynthesis. A partial list of such molecules includes catalytic RNAs, small nuclear.....*Nature Structural Biology*7, 954 - 956 (01 Nov 2000) DOI:10.1038/80729Perspectives
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